

Environmental Protection Agency

§ 147.904

§ 147.902 Aquifer exemptions. [Reserved]

§ 147.903 Existing Class I, II (except enhanced recovery and hydrocarbon storage) and III wells authorized by rule.

Maximum injection pressure. The owner or operator shall limit injection pressure to the lesser of:

(a) A value which will not exceed the operating requirements of § 144.28(f)(3)(i) or (ii) as applicable or;

(b) A value for well head pressure calculated by using the following formula:

$$P_m = (0.733 - 0.433 S_g)d$$

where:

P_m =injection pressure at the well head in pounds per square inch

S_g =specific gravity of inject fluid (unitless)

d =injection depth in feet.

§ 147.904 Existing Class II enhanced recovery and hydrocarbon storage wells authorized by rule.

(a) *Maximum injection pressure.* (1) To meet the operating requirements of § 144.28(f)(3)(ii) (A) and (B) of this chapter, the owner or operator:

(i) Shall use an injection pressure no greater than the pressure established by the Regional Administrator for the field or formation in which the well is located. The Regional Administrator shall establish such a maximum pressure after notice, opportunity for comment, and opportunity for a public hearing, according to the provisions of part 124, subpart A of this chapter, and will inform owners and operators in writing of the applicable maximum pressure; or

(ii) May inject at pressures greater than those specified in paragraph (a)(1)(i) of this section for the field or formation in which he is operating provided he submits a request in writing to the Regional Administrator, and demonstrates to the satisfaction of the Regional Administrator that such injection pressure will not violate the requirement of § 144.28(f)(3)(ii) (A) and (B). The Regional Administrator may grant such a request after notice, opportunity for comment, and opportunity for a public hearing, according to the provisions of part 124, subpart A of this chapter.

(2) Prior to such time as the Regional Administrator establishes rules for maximum injection pressure based on data provided pursuant to paragraph (a)(2)(ii) of this section the owner or operator shall:

(i) Limit injection pressure to a value which will not exceed the operating requirements of § 144.28(f)(3)(ii); and

(ii) Submit data acceptable to the Regional Administrator which defines the fracture pressure of the formation in which injection is taking place. A single test may be submitted on behalf of two or more operators conducting operations in the same formation, if the Regional Administrator approves such submission. The data shall be submitted to the Regional Administrator within 1 year of the effective date of this program.

(b) *Casing and Cementing.* Where the Regional Administrator determines that the owner or operator of an existing enhanced recovery or hydrocarbon storage well may not be in compliance with the requirements of §§ 144.28(e) and 146.22, the owner or operator shall comply with paragraphs (b) (1) through (4) of this section, when required by the Regional Administrator:

(1) Protect USDWs by:

(i) Cementing surface casing by recirculating the cement to the surface from a point 50 feet below the lowermost USDW; or

(ii) Isolating all USDWs by placing cement between the outermost casing and the well bore; and

(2) Isolate any injection zones by placing sufficient cement to fill the calculated space between and the casing the well bore to a point 250 feet above the injection zone; and

(3) Use cement:

(i) Of sufficient quantity and quality to withstand the maximum operating pressure;

(ii) Which is resistant to deterioration from formation and injection fluids; and

(iii) In a quantity no less than 120% of the calculated volume necessary to cement off a zone.

(4) The Regional Administrator may specify other requirements in addition to or in lieu of the requirements set forth in paragraphs (b) (1) through (3)

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of this section, as needed to protect USDWs.

§ 147.905 Requirements for all wells—area of review.

Notwithstanding the alternatives presented in §146.6 of this chapter, the area of review shall be a minimum fixed radius as described in §146.6(b) of this chapter.

Subpart T—Louisiana

§ 147.950 State-administered program.

The UIC program for Class I, II, III, IV, and V wells in the State of Louisiana, except those wells on Indian lands, is the program administered by the Louisiana Department of Natural Resources approved by EPA pursuant to sections 1422 and 1425 of the SDWA. Notice of this approval was published in the FEDERAL REGISTER on April 23, 1982 (47 FR 17487); the effective date of this program is March 23, 1982. This program consists of the following elements, as submitted to EPA in the State's program application:

(a) *Incorporation by reference.* The requirements set forth in the State statutes and regulations cited in this paragraph are hereby incorporated by reference and made a part of the applicable UIC program under the SDWA for the State of Louisiana. This incorporation by reference was approved by the Director of the Federal Register on June 25, 1984.

(1) Louisiana Revised Statutes Annotated sections 30:1-30:24 (1975 and Supp. 1982);

(2) Underground Injection Control Program Regulations for Class I, III, IV, and V wells, Statewide Order No. 29-N-1 (February 20, 1982), as amended June 1, 1985 and January 20, 1986;

(3)(i) Statewide Order Governing the Drilling for and Producing of Oil and Gas in the State of Louisiana, Statewide Order No. 29-B (August 26, 1974) (Composite Order Incorporating Amendments through March 1, 1974);

(ii) Amendments to Statewide Order No. 29-B (Off-site Disposal of Drilling Mud and Salt Water Generated from Drilling and Production of Oil and Gas Wells) (effective July 20, 1980);

(iii) Amendment to Statewide Order No. 29-B (Amendment concerning the

use of Tables 5A and 6A, etc.) (December 15, 1980, effective January 1, 1981);

(iv) Amendment to Statewide Order No. 29-B (Amendment concerning the underground injection control of salt-water disposal wells, enhanced recovery injection wells, and liquid hydrocarbon storage wells) (effective February 20, 1982);

(v) Amendment to Statewide Order No. 29-B (Amendment concerning the offsite disposal of drilling mud and saltwater) (effective May 20, 1983);

(vi) Amendment to Statewide Order No. 29-B (Amendment concerning disposal of nonhazardous oilfield waste) (March 20, 1984, effective May 20, 1984);

(vii) Amendment to Statewide Order No. 29-B (Amendment concerning the administrative approval of injectivity tests and pilot projects in order to determine the feasibility of proposed enhanced recovery projects) (June 20, 1985, effective July 1, 1985).

(4) (i) Statewide Order adopting rules and regulations pertaining to the use of salt dome cavities (i.e., storage chambers) for storage of liquid and/or gaseous hydrocarbons, etc., Statewide Order No. 29-M (July 6, 1977, effective July 20, 1977);

(ii) Supplement to Statewide Order No. 29-M (October 2, 1978);

(iii) Second Supplement to Statewide Order No. 29-M (June 8, 1979).

(b)(1) The Memorandum of Agreement (Class I, III, IV, and V wells) between EPA Region VI and the Louisiana Department of Natural Resources, Office of Conservation, signed by the EPA Regional Administrator on March 17, 1982 and amended by Addendum 1 and Addendum 2 on November 3, 1989;

(2) The Memorandum of Agreement (Class II wells) between EPA Region VI and the Louisiana Department of Natural Resources, Office of Conservation, signed by the EPA Regional Administrator on March 17, 1982.

(c) *Statement of legal authority.* (1) Letter from Attorney General of Louisiana to EPA, "Re: Louisiana Underground Injection Control Program Authorization for State of Louisiana" (Class I, III, IV and V Wells), January 13, 1982, (10 pages);